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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|--|-------------------------|
| 09/856,983 | 09/17/2001 | Klaus Gottschall | 077251-0103 | 6341 |
| <div>7590 Stephen D. Scanion Jones Day, North Point 901 Lakeside Ave. Cleveland, OH 44114</div> | | | <div>EXAMINER HARLAN, ROBERT D</div> | |
| | | | <div>ART UNIT 1713</div> | <div>PAPER NUMBER</div> |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | | MAIL DATE | |
| 3 MONTHS | | | 01/22/2007 | |
| | | | DELIVERY MODE | |
| | | | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary

Application No.

09/856,983

Applicant(s)

GOTTSCHALL, KLAUS

Examiner

Robert D. Harlan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-29 and 33-43 is/are rejected.
- 7) ☐ Claim(s) 30-32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/2006 has been entered.

2. The IDS and Remarks filed by Applicant on 10/31/2006 has been entered.

Response to Amendment/Arguments

3. Applicant's amendment and arguments filed on 10/31/2006 have been fully considered and they are found persuasive.

4. The rejection of claims 25-43 under 35 U.S.C. 103(a) as being unpatentable over Anseth et al., U.S. Patent No. 5,902,599 (hereinafter "Anseth") in view of Lee et al., U.S. Patent No. 5,089,364 (hereinafter "Lee") is withdrawn.

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Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 25-29, 34-37 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. In claim 25, line 3, "the conformation" lacks an antecedent basis.

8. In claim 26, step (iii) requires cross-linking. This is ambiguous because the network is already cross-linked is this an additional cross-linking step or is the polymer not cross-linked until step (iii)?

9. In claims 27-29, step (ii) takes place in two steps. However, step (ii) is only a single step adapting polymer from (i) to a template. Please explain.

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10. In claim 34, line 3, "the other substances" lacks an antecedent basis.

11. In claims 34 and 39, the Applicant uses the term "preferentially." Description of the examples or preferences is properly set forth in the specification rather than the claims. If stated in the claims examples and preferences lead to confusion over the intended scope of a claim. Therefore, each occurrence of "preferentially" should be deleted.

12. Claim 37 is indefinite because the claim is independent although written as like a dependent claims. What's step (ii)? Where's the antecedent for "the polymer?"

13. In claim 39, in step (iii) the polymer has already been exposed to the template in step (i). The final step reads as redundant. Please provide explanation. The same is said about claims 35-36 where there is a third step that requires enhancing the conversion or recognition of the template when the template is already exposed the polymer in step (iii).

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Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. Claims 25, 33 and 38-39 are rejected under 35 U.S.C. 102(a) as being anticipated by Anseth et al., U.S. Patent No. 5,902,599 (hereinafter "Anseth"). It is clear from the Applicant's remarks the current claims teach around the imprinting technique where a monomer is polymerized and simultaneously cross-linked in the presence of a substrate; subsequently, the substrate is removed by extraction with a suitable solvent provide a network having pores that can be used in separation or recognition processes.

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16. The claims are interpreted as broadly as possibly. The Examiner concurs the Applicant in that Anseth teaches a process where SA or CPH or oligomers thereof, are reacted with MA to yield an anhydride functionalized monomer, which is cross linked to yield a cross linked polymer network. See Anseth, col. 3, line 12 through col. 5, line 20. The cross-linked polymer network corresponds to step (i) of claim 25 and step (ii) of claim 39. In the drug delivery application, Anseth teaches the drug is incorporated before or after the cross-linking step into the polymer/prepolymer. See Anseth, col. 7, lines 60 through col. 8, line 38. Thus it is clear from the reading of Anseth that the addition of a drug compound, protein and/or carbohydrate can be added before or after the polymerization step covering both claims 25 and 39 as best can be interpreted. Furthermore, the energy requirement (more than 0.1 kcal/mole) is minimal at best covering most inter- and intra-molecular bonding particularly H-bonding.

17. The Examiner contends that the Applicant argues limitation that are not in claims (e.g. release of the template is not required by the claims; act as a template due to non-reversible

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binding to the polymer; step (iii) of claim 39 is indefinite, see above).

18. Claims 25, 33, 34 and 39-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Winter et al., U.S. Patent No. 6,558,607 B1 (hereinafter "Winter"). Winter teaches micro and nano-porous materials made from cross-linked polymers crystallized from supercritical fluids with many uses in medical fields and separation science and others. See Winter, Abstract; col. 1, line 66 through col. 4, line 22. Winter clearly teaches step (i) the cross-linking of a polymer. See Winter, col. 5, line 30 through col. 7, line 11. Winter further teaches a method of using the cross-linking polymers in separation, biological and catalysis that require the introduction of a chemical compound or biological structure. See Winter col. 10, lines 8-67; claims 16-20. Furthermore, Winter teaches the method for using the cross-linked polymer structures in separation science particularly chromatography that require selection, detection and signaling. See Winter, col. 3, line 45 through col. 4, line 22.

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19. Claims 30-32 are objected to as being dependent upon a rejected base claim. The prior art recited does not teach the polymeric network prepared on a support material.

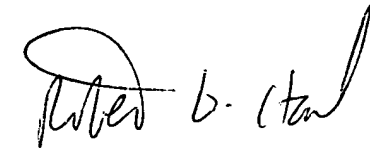
20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert D. Harlan whose telephone number is (571) 272-1102. The examiner can normally be reached on Mon-Fri, 10 AM - 8 PM.

21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 273-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Robert D. Harlan", with a stylized flourish at the end.

Robert D. Harlan
Primary Examiner
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rdh